



The Impact of Microtransactions on Consumer Behaviour in Free-to-Play Video Games

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Abstract

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<p>This study examines the impact of microtransactions on consumer behaviour in free-to-play video games. The primary objective was to understand how microtransactions influence player's attitudes, spending behaviour, and overall satisfaction with the gaming experience. The research combined survey data and interviews with gamers and industry expert to gather comprehensive insights.</p> <p>The study involved both quantitative and qualitative methods. Surveys were conducted to collect numerical data on gaming habits, spending patterns, and views on microtransactions. Additionally, in-depth interviews with a seasoned gamer provided qualitative insights into personal experiences and perceptions of microtransactions.</p> <p>The findings indicate that most players frequently engage with free-to-play games and utilize microtransactions. Motivations for purchases include enhancing the gaming experience, social influence, and impulsive buying. Despite their popularity, microtransactions raise significant ethical concerns, such as exploitative pricing and gambling-like mechanisms targeting vulnerable players.</p> <p>Future research should address the current study's limitations by expanding the sample size and diversity. Incorporating objective data collection methods and exploring the long-term effects of microtransactions across different cultures and gaming platforms.</p>
Key words Microtransactions, free-to-play games, consumer behaviour, loot box, player spending, skin, battle pass.

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1. Introduction

1.1 General introduction

The video game industry has come a long way since the first commercial video game, *Computer Space*, was introduced in the 1970s (Daultrey 2015). These days, the video game industry stands as one of the largest and most lucrative sectors. With a global market value surpassing \$347 billion in 2022 (Clement 2024), this growth is attributed to various factors, including technological advancements, widespread high-speed internet access, and the rising prevalence of free-to-play games (Golynchev 2019). Notably, the mobile gaming market has played a significant role in this exponential growth, boasting an estimated revenue of \$248 billion USD, primarily driven by the free-to-play model (Clement 2024).

The author chose to focus on microtransactions within free-to-play games because of their significant impact on the gaming industry and consumer behaviour. Microtransactions are payments made within the game to gain access to additional features and in-game cosmetics. While some players enjoy being able to enhance and customize their gameplay experiences with these purchases, others may feel exploited and view it as a gateway to gambling. The rapid growth of the industry calls for further investigation into these effects, making it a timely and relevant topic.

Concerns have been raised regarding the impact of microtransactions on vulnerable players, particularly children. These transactions can exploit kids' lack of understanding about money and the way they're drawn to persuasive marketing. Microtransactions can also lead to compulsive spending and financial problems, particularly for younger players who might not fully understand the consequences of their actions. Because of these issues, there has been a push for more regulations to protect players. Some countries have already taken steps in this direction, for example, the Netherlands has banned video game loot boxes, comparing them to gambling. (Droidgamers 2022)

Moreover, game developers often use sophisticated algorithms to target vulnerable players, including children, with microtransaction offers tailored to their preferences and spending habits. These algorithms analyse player data and behaviour to identify opportunities for monetization and encourage additional spending (Zendle & Cairns, 2018). By tracking player's in-game actions, preferences, and purchasing history, developers can tailor microtransaction offers to individual's interests, increasing the likelihood of conversion and maximizing revenue potential. However, it's essential to note that the causal relationship between microtransaction spending and problem gambling is still under investigation. Research by Zendle and Cairns (2018) highlights the correlational nature of this phenomenon, raising questions about whether excessive spending on microtransactions leads to problem gambling or vice versa. It's possible that both directions of causality are

true, with problem gamblers spending more on loot boxes while purchasing loot boxes simultaneously leading to increases in problem gambling among gamers.

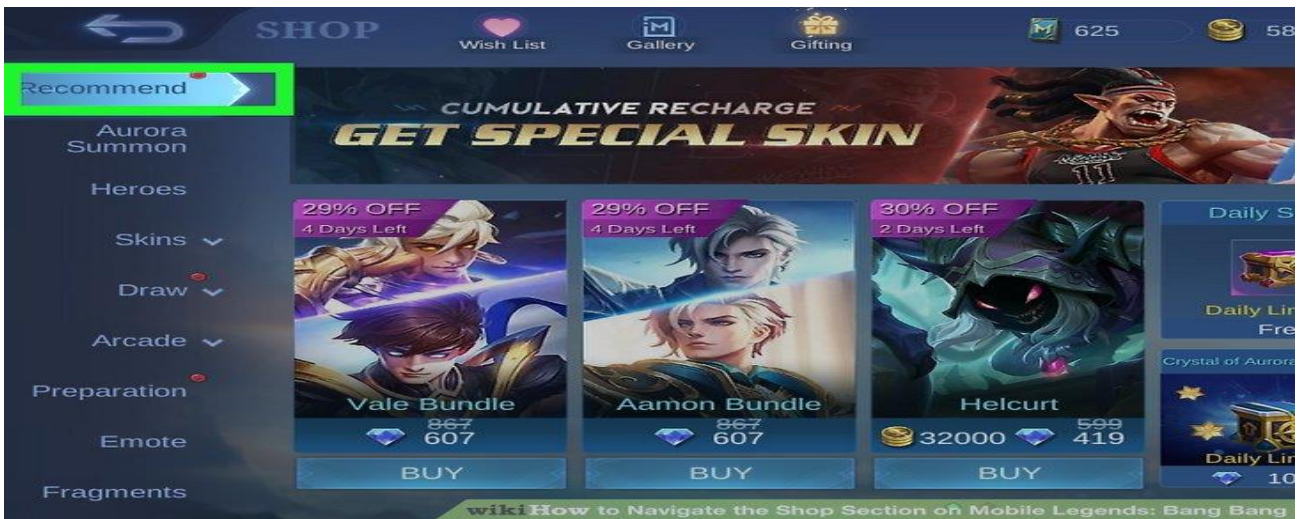


Figure 1. Free-to-play Mobile legends: Bang Bang games store page.

Figure 1 is an example of how a free-to-play mobile game algorithm suggests items you have used in prior engagements of the game. Giving discounted offers for a limited time, making the buying of these items “justifiable”, due to the nature of time, discount, and preference. These pages update frequently and suggest items based on the characters you have used. The algorithms also give suggestions on the main page on items “just for you”, that pop up after logging in.

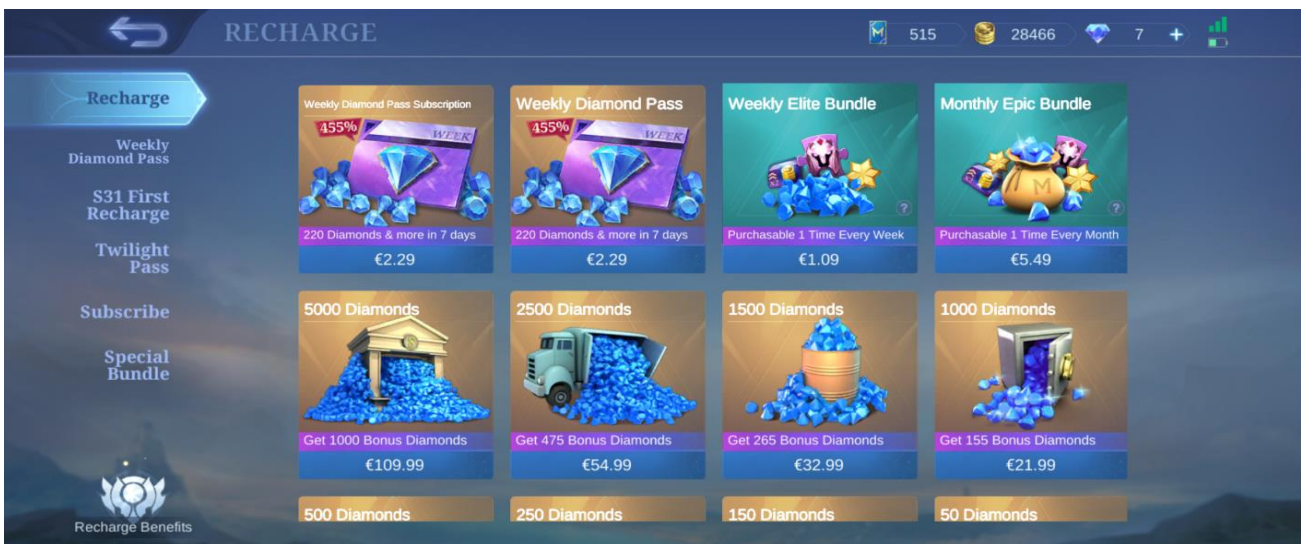


Figure 2. Mobile Legends: Bang Bang currency exchange.

Another contributing factor is the visualization of currency in these games. In figure 2 you can see how they show up in game currency. The diamonds are purchased with real money but converted

into an unrecognizable amount, this is often used to hide the true use of real money. 1.09 euros, you get 50 diamonds, instead of 1 euro = 1 diamond. Especially with kids the reality of money is disrupted by the amount you gain, resulting in unreasonable amounts spent. They also offer weekly and monthly deals, where u get a larger number of diamonds for the money you spend. This is all designed to get the most amount of money from the user, while offering the game for free.

In addition, microtransactions raise ethical concerns beyond their financial effects, involving questions of consumer rights and corporate ethics. Game developers often defend microtransactions as vital for funding ongoing game development and support for free-to-play games. However, critics argue that this prioritizes short-term profits at the expense of player welfare (Schreier, 2021). This conflict between financial goals and ethical considerations highlights the importance of transparency and accountability in the gaming industry. It emphasizes the need for a deeper understanding of how commercial interests and consumer well-being interact, especially when kids are regarded.

1.2 Objectives and Research Problem

Objectives of the research:

The primary objective of this research is to explore the impact of microtransactions on consumer behaviour in free-to-play video games. This includes understanding how microtransactions influence player's attitudes, spending behaviour, and overall satisfaction with the gaming experience.

Research Question:

"How do microtransactions affect player's attitudes towards free-to-play games?"

Investigative Questions:

To answer the main research question, the study is guided by the following investigative questions:

1. What are the theories on consumer behaviour related to microtransactions?
2. How are microtransactions implemented in free-to-play games?
3. What is the impact of microtransactions on player's spending behaviour?
4. How do players perceive the fairness and ethical aspects of microtransactions?

Demarcation:

This study focuses on free-to-play video games that incorporate microtransactions. We'll be looking at different types of microtransactions, such as cosmetic items that change how characters look, functional items that can improve gameplay, and loot boxes that offer randomized rewards. We will combine surveys and interviews with gamers and industry experts to gain a comprehensive view. This approach will help us understand gaming habits, spending patterns, and how players feel about microtransactions.

1.3 Key Concepts

Microtransactions: Microtransactions are a part of a business model where users who purchase or download a game have the possibility to purchase with real money virtual items or in game currency. Microtransactions often come with free to play games, to get money or monetize the video game. In essence the game is free, but it is filled with marketed microtransactions that provide unique skins, items and in game currency to buy these items (Colagrossi, 2021).

AAA Title: AAA is a classification term used in the gaming industry that shows the game is a high level, big budget, and highly regarded video game. Often a triple a game is regarded as the top-of-the-line video game and in most cases are among the year's bestsellers (Karthikeyan, 2021).

Free to play: Free to play video games is quite literally what it says, free to play. Free to play often does come with a twist, as they provide most of the crucial content to play the game but can have some features of other additions behind a paywall. In almost all of the triple a free to play video games, there is an absorbent amount of microtransactions marketed to players.

Battlepass: Regarding video games, a battlepass is a type of way to monetize a free to pay video game. A battle pass is an additional content provided in video games that has a rewarding system that provides players who buy it with new rewards every level they gain. Making it so that you invest for example 10 euros and the battle pass provides 20 euro worth of items, but they require a minimum amount of play time and so called "grind" to get the best rewards (Computer Hope, 2021).

DLC: Short for Downloadable content, DLC is often a paid addition to video games, that provides additional content for the game released (Dictionary, 2022).

Lootbox: is a in game item that often costs real money or in game currency. This item is a good example of gambling, it is a box that you open for money and have a chance to get unique, expensive, or cheap items for the game.

RNG: Short for random number generator, RNG is used as a term in video games meaning that there is a random number chance to get a certain item from for example a loot box that is sold in game or a drop that comes from doing a task in game (Magoni, 2021).

Skin: Skins are a term used in video games that means cosmetic purchases done in the game. For example, "I purchased a new skin for my character that makes him look cool".

Monetization strategies: This refers to the various methods used by game developers to generate revenue from free-to-play video games, such as through in-app purchases, advertising, and subscriptions (Profitwell, 2021).

User acquisition: This refers to the process of acquiring new players for a game. It includes the various methods and techniques used to attract players to a game, such as through advertising, social media, and search engine optimization (Adjust, 2022).

In-game economy: This refers to the virtual currency and virtual goods that are used in a game. It includes the various methods used to earn and spend virtual currency, such as through microtransactions (Shumaker, 2020).

Gamification: This refers to the use of game design elements in non-game contexts, such as in marketing and advertising. It includes the use of rewards, points, and leaderboards to engage and motivate customers (Meriam-webster, 2023).

Viral marketing: This refers to the use of social networks, word of mouth, and other forms of viral communication to spread awareness and promote a product or service.

Behavioural targeting: This refers to the practice of delivering personalized content and advertising to users based on their browsing history and behaviour (Lotame, 2021).

Persuasion: This refers to the use of psychological and communication theories to influence consumer behaviour, such as using social proof, scarcity, and authority (Dictionary, 2023).

2. Theoretical Framework

2.1 Theories on Consumer Behaviour

Exploring consumer behaviour within the context of the video game industry, especially regarding microtransactions in free-to-play games, forces us to first understand the foundational theories that explain the decision-making processes. Among these, the Theory of Planned Behaviour and the Self-Determination Theory are vital, offering insights into the internal and external factors influencing gamer's purchasing decisions.

The Theory of Planned Behaviour (TPB), articulated by Ajzen (1985), presents a framework for understanding how an individual's behaviour is a direct outcome of their intention, shaped by attitudes toward the behaviour, subjective norms, and perceived behavioural control. In video gaming, this translates to the impact of gamer's personal attitudes towards microtransactions, the influence of peer perceptions, and their self-worth regarding spending (Han & Stoel, 2017). A player's valuation of in-game items, combined with the social standing those items represent within their gaming community, can significantly drive their engagement in microtransactions. (Han & Stoel, 2017)

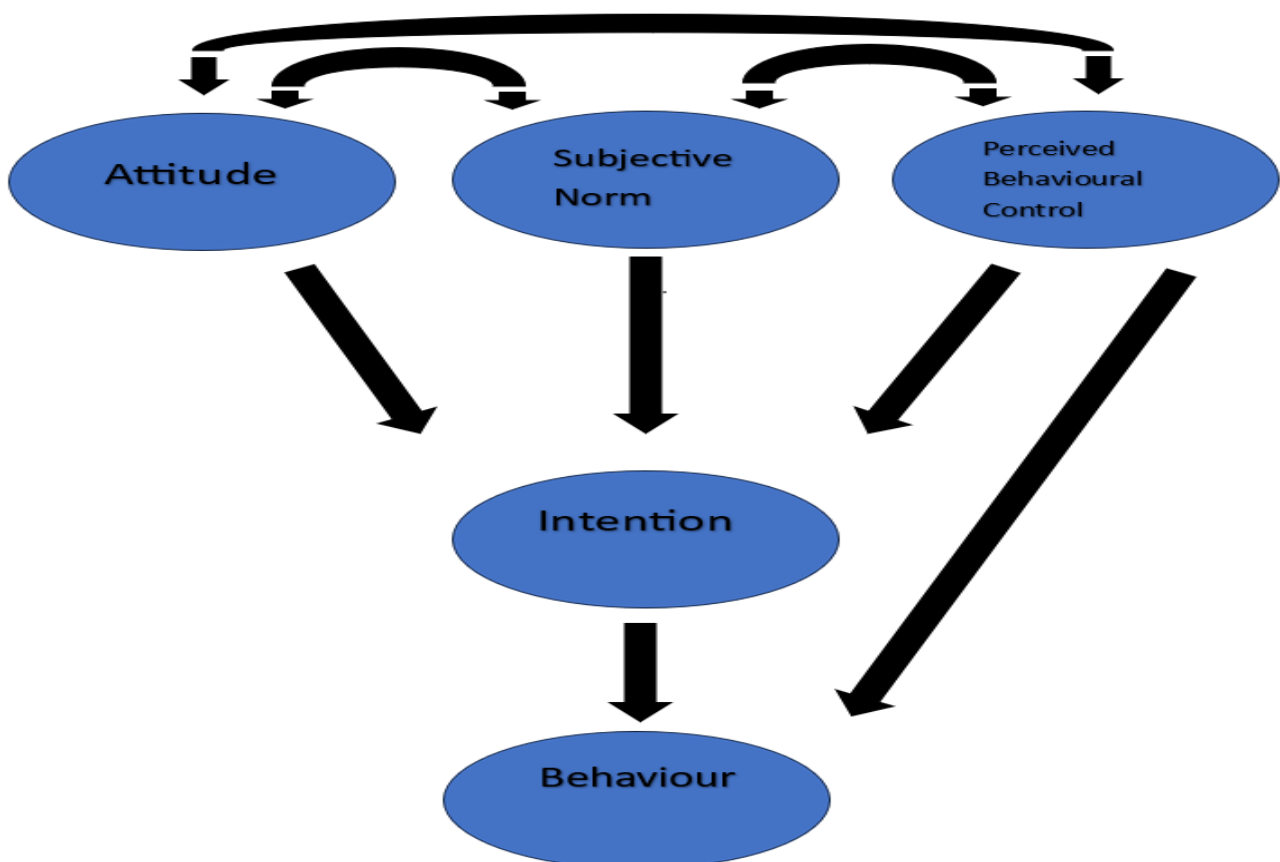


Figure 3. Theory of Planned Behaviour Diagram

Self-Determination Theory (SDT), introduced by Deci and Ryan (1985), shifts the focus towards intrinsic and extrinsic motivations behind behaviours. Central to SDT are autonomy, competence, and relatedness needs, when satisfied, can promote motivation and well-being. In the realm of video gaming, microtransactions can serve as extrinsic motivators that interact with intrinsic gaming motivations. For example, the purchase of an item that enhances a player's in-game ability fulfils the need for competence, while exclusive items can foster a sense of belonging and distinction within the game community. (Banyte, 2015)

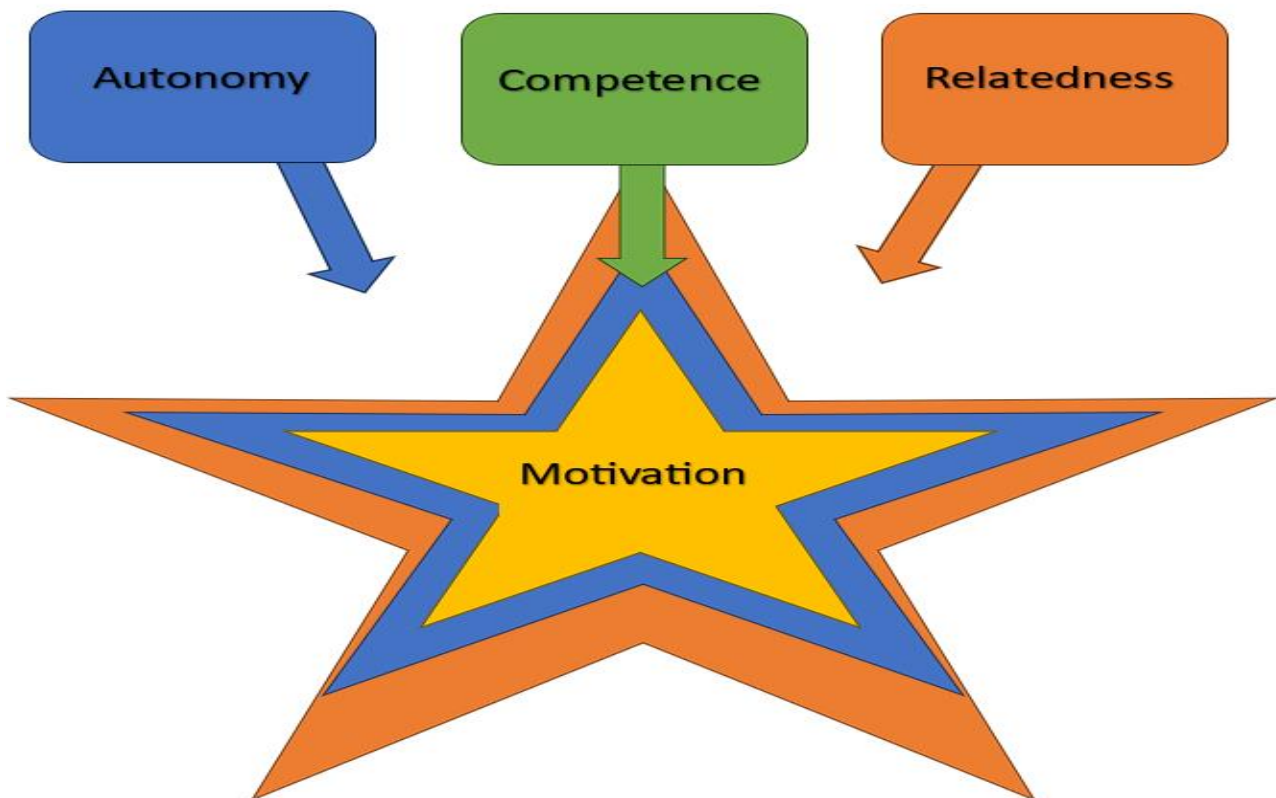


Figure 4. Self-determination Diagram

Combining the theory of planned behaviour and self-determination theory provides a comprehensive framework for examining gamer behaviour towards microtransactions. TPB interprets the behavioural intentions behind microtransactions, factoring in societal and personal motives. SDT complements this by highlighting the role of intrinsic and extrinsic motivators. Together, these theories offer nuanced insights into the complex motivations behind gamer's engagement with microtransactions.

2.2 Concept of Microtransactions

The video game industry has undergone a remarkable transformation, growing to an unbelievable market value of over \$347 billion by 2022. This growth is not just a testament to technological advances but also a shift in how we interact with digital entertainment (Clement, 2024). Leading the charge in this digital revolution are the free-to-play games, which have opened the world of gaming to a broader audience, thanks to widespread internet access and the nearly universal presence of mobile devices (Golynchev, 2019).

Central to the monetization of free-to-play videogames are microtransactions, a mechanism allowing players to use real-world currency to purchase virtual goods, such as items, enhancements, or currency, thereby personalizing their gameplay or accelerating their progress (Golynchev, 2019).

Microtransactions can be offered in several forms, each tailored to distinct player preferences:

Aesthetic Enhancements: Offering players the ability to purchase unique cosmetic items, such as character skins and weapon designs. These items enable players to personalize their in-game appearance, fostering a sense of individuality without altering gameplay mechanics. Notably, "Fortnite" provides a vast array of cosmetic options, allowing players to express their identities within the game (Joseph, 2021).



Figure 5. Snapshot of a Section in the Fortnite Item Shop, 2024.

Figure 5 is an example of a Fortnite cosmetic shop display, featuring a skin available for purchase. Players can buy skins with in-game currency, which can be earned through gameplay or purchased with real money. Options include purchasing individual items or entire bundles. The shop's offerings change daily, presenting a variety of hundreds of cosmetic items.

Advancement Transactions: These transactions offer in-game advantages or shortcuts, such as experience boosters or in-game currency. By purchasing these, players can bypass the repetitive aspects of gameplay, accelerating their progression. This approach is exemplified by mobile games like "Clash of Clans," which utilize advancement transactions to enhance the gaming experience (King, 2019).



Figure 6. Snapshot of the early stages in Clash of Clans.

Figure 6 is an example from "Clash of Clans" demonstrating the option to use in-game currency, purchasable with real money, to accelerate game progress. Players can choose to advance the construction or upgrade of buildings, with the time saved varying based on the structure's size and complexity, ranging from minutes to several days.

Randomized Rewards: Introducing an element of chance, loot boxes offer randomized rewards to players. Containing items ranging from cosmetic enhancements to rare collectibles, loot boxes blend the excitement of gambling with in-game cosmetics. Games like "Counterstrike 2" and "FIFA" feature loot boxes, drawing players into the pursuit of valuable items through chance-based mechanics (Joseph, 2021).

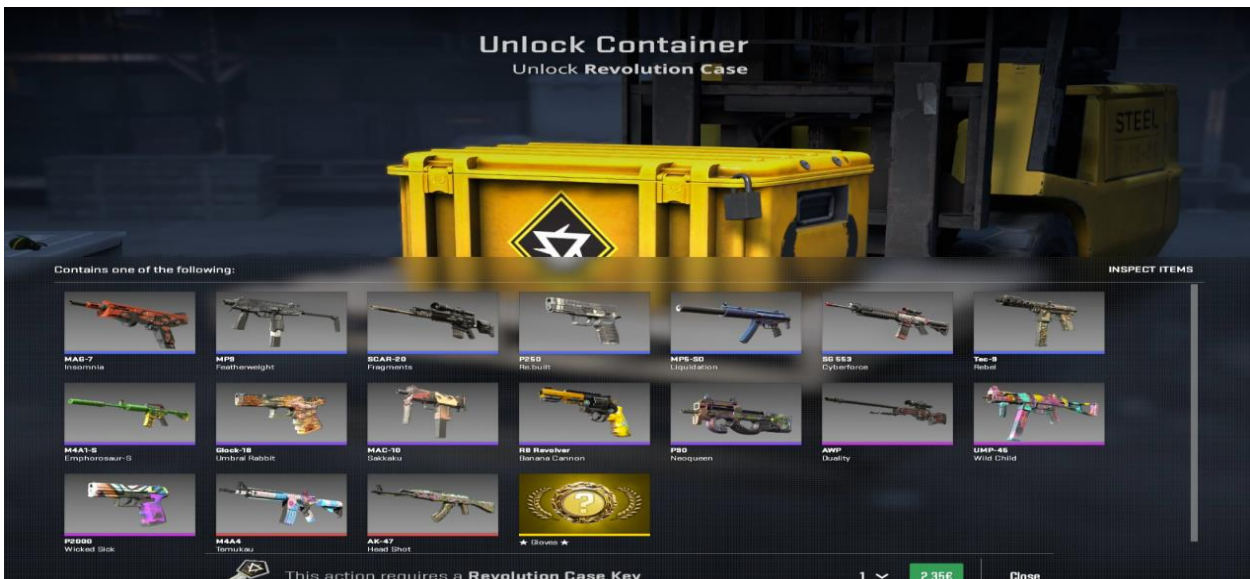


Figure 7. Snapshot of a "Container" in Counter-Strike 2, one of 41 different types available. These containers vary widely in price, ranging from as little as \$0.13 to as much as 90 euros, reflecting the diversity and potential value of the items they can contain.

This figure 7 image illustrates Counter-Strike 2's system, where players are rewarded with free loot boxes for meeting weekly experience point goals. Each box costs approximately 2 euros to open and offers the possibility of containing items worth more than the opening cost. However, these more valuable items are relatively rare. Notably, the most expensive cases are no longer actively dropped in-game and can only be acquired through third-party sites or the Steam market, if available.

A pivotal moment in the industry's approach to transparency occurred when Valve, a leading game developer and digital distribution company, was compelled to disclose the odds of obtaining specific items from loot boxes. This disclosure was a response to regulatory demands from the Chinese government, which aimed to protect consumers and address concerns regarding the nature of loot boxes as gambling-like mechanisms. (DMarket Blog, 2021)

According to the information released by Valve, the odds of obtaining items from loot boxes are as follows:

1. Items classified as Rare / Mil-Spec (Blue) have the highest probability of appearing, at 79.92%.
2. Mythical / Restricted (Purple) items are less common, with a chance of 15.98%.
3. The probability of obtaining Legendary / Classified (Pink) items is significantly lower, at 3.2%.
4. Ancient / Covert (Red) items are rarer still, with a drop chance of only 0.64%.
5. The most elusive category, Exceedingly Rare Special (Gold), has a minuscule probability of 0.26% (Valve Corporation, 2017; DMarket Blog, 2021).

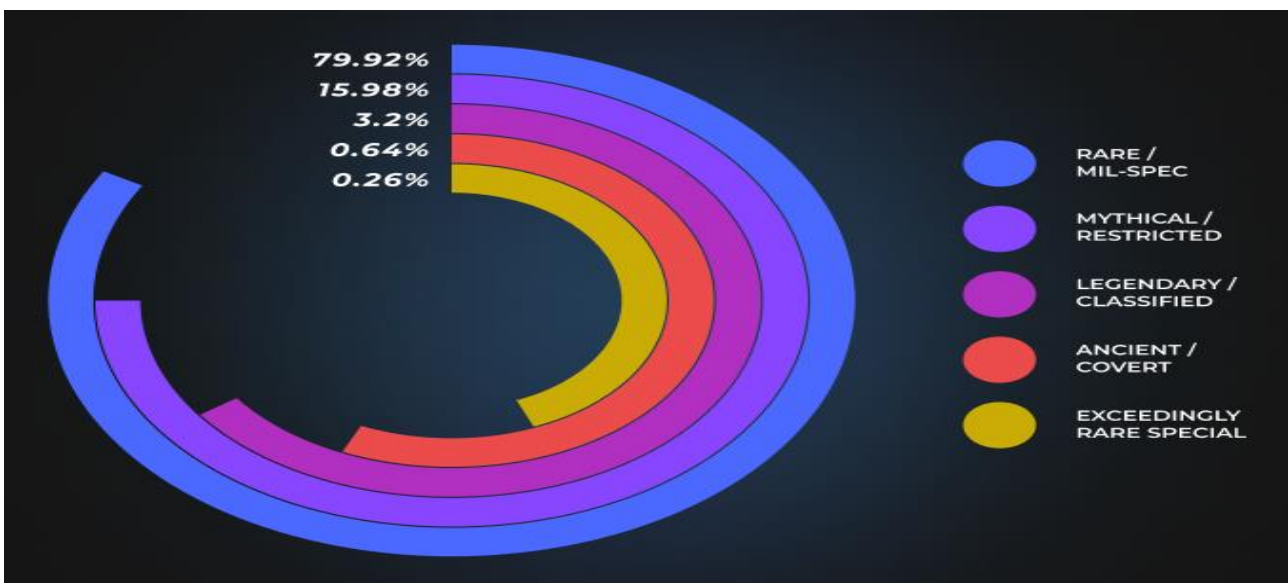


Figure 8. A picture from Dmarket's Blog, where they have visualized the odds of obtaining items from CS2 containers. (DMarket Blog, 2021)

This transparency allows players to make more informed decisions regarding their investments in loot boxes. By understanding these odds, players can better assess whether participating in such microtransactions aligns with their personal value of potential rewards.

Tier-Based Reward Systems: A notable advancement in microtransaction strategies is the implementation of battle or season passes. This model grants players access to a structured reward system, where progressing through specific challenges or reaching certain levels within a set timeframe unlocks exclusive rewards. Contrary to the randomness of loot boxes, battle passes outline a transparent roadmap for rewards. This approach not only fosters sustained player engagement but also accommodates diverse player preferences by offering both complimentary and premium reward tiers. Titles such as "Apex Legends" and "Call of Duty: Warzone" exemplify the successful integration of this model, appealing to a broad player base with varying levels of investment in the game (Joseph, 2021).



Figure 9. Snapshot of Call of Duty: Warzone's battle pass in 2024.

Figure 9 showcases the "Call of Duty: Warzone" battle pass, which includes a variety of free items and boosts. While certain content is accessible without cost, most premium items are locked behind the pass purchase. This model allows players to view their progress and the potential rewards, clearly illustrating what could be unlocked through purchase. The battle pass system has become a common monetization strategy among free-to-play games, serving as a significant revenue stream by offering exclusive content to incentivize purchases.

Battle passes have been widely adopted across various free-to-play games as developers seek additional revenue streams. This approach not only keeps players hooked by setting clear goals and giving out rewards, but it also smartly divides the game content. This makes players want to spend money to get exclusive items or to keep playing and unlock special cosmetics at the end of a battle pass.

2.3 Game Development and Marketing Concepts

The free-to-play (F2P) model has transformed the video game industry, creating both opportunities and challenges in game development and marketing. This model's success is dependent on sophisticated strategies across game design, player engagement, and monetization techniques. This section delves into these strategies, with a particular focus on enhancing player retention, utilizing data analytics, adapting to global market trends, and learning from industry case studies.

Game Design in Free-to-Play Models

F2P game design aims to attract a broad audience by balancing accessibility with engaging content to ensure prolonged engagement and effective monetization. Core gameplay in F2P models is designed to be immediately engaging yet offer enough depth to retain players over time. This includes integrating factors that encourage regular returns, such as daily rewards, ongoing challenges, and frequently updated content, all crucial for keeping the gameplay experience fresh and engaging (Civelek 2018).

Sophisticated Monetization Strategies

Monetization in F2P games involves more than direct transactions, it integrates monetization strategies into the game's core mechanics:

- **Microtransactions:** These range from aesthetic enhancements to advancement boosts and randomized rewards, each designed to cater to varying player preferences and spending behaviours (Colagrossi 2021).
- **Advertisements:** Implemented within the game to offer players in-game currency or bonuses in exchange for watching ads, providing a revenue stream while offering players benefits without a direct cost.
- **Seasonal or Battle Passes:** These passes offer players a system of tiers that reward them as they complete specific objectives within a predetermined timeframe, enhancing player engagement and providing clear goals.

Understanding User Purchases Behaviour

Analysing user purchase behaviour is critical in optimizing monetization strategies. This involves studying how different player segments interact with the game's monetization features, including their spending patterns and the psychological triggers behind their purchases. Insights gained are crucial for tailoring pricing strategies and effectively segmenting the user base (Hanner 2015).

Effective Marketing Tactics

Marketing F2P games requires leveraging data analytics to fine-tune strategies for user acquisition and retention:

- **Targeted Advertising:** Utilizing player data to target advertisements based on user behaviour and preferences.
- **Community Engagement:** Actively maintaining a player community through forums, social media, and in-game events, which help sustain player interest and loyalty.
- **Influencer Partnerships:** Collaborating with gaming influencers can extend the game's reach and attract new players through platforms like Twitch and YouTube.

Example Case Studies:

League of Legends: Riot Game's "League of Legends" demonstrates the successful application of continuous updates and a well-integrated esports ecosystem to maintain player engagement. The game has thrived due to its responsive design updates, which keep gameplay fresh and engaging. The annual world championships and other tournaments help maintain high levels of player engagement by fostering a competitive community and offering players goals to aspire to (Hanz 2020).

Battleborn: On the other hand, Gearbox Software's "Battleborn" faced significant challenges upon its release. Positioned in direct competition with Blizzard's "Overwatch," it struggled to establish a distinct identity in the crowded market of team-based shooters. "Battleborn" suffered from poor timing and unclear marketing, which failed to communicate the unique aspects of the game effectively to potential players. These challenges highlight the critical importance of clear market positioning and strategic release timing in the success of F2P games (Ready players 2016).

2.4 Ethical Considerations

As the prevalence of microtransactions in free-to-play (F2P) video games continues to rise, so do concerns about their ethical implications. This section delves into the ethical challenges posed by microtransactions, particularly their potential to encourage addictive behaviours and their effects on vulnerable populations, including children and those susceptible to gambling addictions.

Addictive Behaviours and Microtransactions

Microtransactions often employ psychological principles that can encourage addictive behaviours. These mechanisms are designed to maximize player engagement but can also lead to problematic gaming:

- **Compulsion Loops:** Many F2P games feature compulsion loops that reward players in ways that encourage continuous play. When tied to spending money, these loops can lead to compulsive spending habits as players seek the rewards offered by microtransactions (Kim 2014).
- **Variable Reward Schedules:** Microtransactions frequently use variable reward schedules, like gambling mechanisms, which can create a 'ludic loop' where the anticipation of a reward keeps players engaged. This can be particularly problematic as it may trigger the reward centres of the brain in a way that mimics gambling addiction (Cherry 2023).

Impact on Vulnerable Populations

The impact of microtransactions extends disproportionately to vulnerable groups, raising significant ethical concerns:

- **Children and Adolescents:** Young players are particularly susceptible to the allure of microtransactions. Games often target these players with appealing character skins, loot boxes, and other items, raising concerns about undue influence and the early onset of consumerist behaviours (Osborne 2023).

- **Financial Exploitation:** There is also the risk of financial exploitation, particularly for individuals who may not fully understand the long-term consequences of their spending. This is exacerbated in games that hide the real-world cost of items behind in-game currencies or complicated bundle offers.

Regulatory Responses and Industry Practices

Given these concerns, there have been various regulatory responses aimed at curbing the negative impacts of microtransactions:

- **Legislation and Regulation:** Some regions have implemented or are considering laws that restrict or regulate the use of microtransactions, particularly those resembling gambling practices, such as loot boxes (Przybysz 2023).
- **Industry Self-Regulation:** In response to growing scrutiny, some industry players have introduced more transparent practices regarding microtransactions, including disclosure of odds in loot boxes and setting spending limits for younger players.

An example of Counter-Strike 2's gambling problem and regulatory responses:

As Counter-Strike 2 (CS2) has grown in popularity, it has faced issues with gambling that involve in-game items like skins. These concerns, such as unregulated gambling and the exposure of underage players to these activities have led to regulatory actions by authorities (Przybysz 2023).

Many CS2-related gambling sites operate without proper licences, which can expose players to scams and unfair practises. This accessibility has also raised concerns about potential gambling addiction among younger players (Dutch Gaming Authority, 2024).

In response, governments have tightened the rules on video game gambling. They now require that some in-game items used for betting be treated as gambling products, needing proper licences to operate. Developers are limiting how items can be transferred on third-party platforms to cut down on gambling activities. (Przybysz 2023).

These regulations have caused many gambling sites linked to CS2 to either shut down or significantly change their operations. Game developers are also adjusting game designs to prevent the use of in-game items for gambling, like making the odds of item drops clearer.

The new rules require gambling sites to be upfront about the odds of winning and provide resources for gambling addiction. They are also putting in place stronger security measures like two-factor authentication and spending limits to protect players' investments and personal information.

3. Research Methods

3.1 Research Approach and Justification

This study uses a mixed method research approach of combining both quantitative and qualitative research, to gain insight into how microtransactions affect player's attitudes towards free-to-play games.

Quantitative Approach:

For the quantitative research we conducted surveys to collect numerical data on player's gaming habits, spending patterns, and views on microtransactions. This approach allowed us to gather information from many participants, ensuring our findings are statistically valid and allowing us to spot trends and patterns. We used closed ended questions, to ensure the data could be easily quantified and analysed with statistical methods.

Qualitative Approach:

The purpose of conducting interviews within this study was to delve into the experiential and personal insights regarding the impact of microtransactions in video games. By speaking with an experienced gamer who's spent years buying and selling in-game items, the research hopes to reveal a deeper insight into consumer behaviour and the economic aspects of both free-to-play and paid gaming.

Justification:

Using both surveys and interviews allows us to take advantage of the strengths of each method. Surveys give us a broad overview and solid statistical foundation. Interviews provide detailed insights and context. Combining these approaches, we ensure a more thorough and reliable analysis, as the different types of data complement each other.

3.2 Target Group and Its Selection

Selection Process for Survey Participants:

The target group for this study consisted of gamers who engage with free-to-play games. Participants were selected through random sampling by posting the survey on various online platforms such as forums, Reddit, WhatsApp group chats, and through friends and their networks. This method ensured a wide and diverse range of respondents.

This approach helped us gather data from a range of sources, ensuring our sample included people with diverse backgrounds and experiences. The survey had specific questions that led free-to-play gamers to relevant sections. This allowed us to focus on their gaming habits, spending patterns, and views on microtransactions. This method gave us the opportunity to capture a broad spectrum of perspectives and gain a comprehensive understanding of the research topic.

Selection Process for Interview Participants:

In addition to the survey, interviews were conducted to gain deeper insights into the experiential and personal aspects of microtransactions in video games. The interview participant was selected based on their extensive experience with microtransactions. The interviewee was a 27-year-old male gamer with over ten years of experience in video gaming and significant financial involvement in microtransactions.

The interview was conducted in person and lasted about 40 minutes, allowing for a thorough exploration of the topic. The semi structured format enabled the interviewer to delve deeper into interesting areas as they came up, while still covering all the key topics.

This combined approach of surveys and interviews ensured that the study captured both broad statistical data and detailed personal insights. Providing a well-rounded understanding of the impact of microtransactions on gamers.

3.3 Data Collection Methods

The questionnaire was carefully designed to gather data on consumer behaviours regarding microtransactions in video games. The main objective was to understand how microtransactions influence gaming experiences, spending habits, and player's perceptions of fairness and value.

The questionnaire was designed with a mix of structured and semi-structured questions to collect both quantitative and qualitative data. It had multiple-choice questions, Likert scales to gauge attitudes and perceptions, and open-ended questions that allowed respondents to share detailed personal insights and stories. This approach was selected to thoroughly understand how gamers interact with microtransactions, capturing everything from straightforward behavioural patterns to their deeper personal views.

3.4 Data Analysis Methods

Quantitative Data Analysis:

The quantitative data collected from the surveys was analysed using both Excel and Webropol's own software. Descriptive statistics, such as means, medians, and standard deviations, were calculated to summarize the data. Excel's built-in functions and tools and Webropol's statistical analysis, allowed for an effective organization and analysis of the data. Allowing us to discover trends and patterns among the respondent's gaming habits, spending patterns, and views on microtransactions.

Qualitative Data Analysis:

The qualitative data from the interview was analysed using a manual analysis process in a Word document.

1. **Familiarization:** Transcribing the interview recordings and thoroughly reading through the transcripts to become familiar with the content.
2. **Coding:** Highlighting significant words, phrases, and sections of the text that related to the research questions.
3. **Theme Development:** Grouping similar codes together to form overarching themes that captured the essence of the participant's experiences and perspectives.
4. **Reviewing Themes:** Ensuring that the themes accurately reflected the data and were distinct from one another.

5. **Defining and Naming Themes:** Clearly defining each theme and providing concise names that conveyed their core meaning.

4. Results

4.1 Analysis of Interview Data

The thematic analysis of the interview with a seasoned gamer, who has over a decade of experience with microtransactions, provides profound insights into how microtransactions are perceived and interacted with by consumers. The participant's journey began with early microtransaction experiences in games like "Habbo Hotel" and "Farmville," which initially sparked his interest due to the exclusive items that set him apart from others. His reflections offer a narrative of evolving gamer engagement, from casual purchases to an economically strategic approach in games like "FIFA" and "Counter-Strike."

Reflecting on his earliest interactions with microtransactions, the gamer described the allure of exclusivity and the social prestige associated with owning unique items. These early experiences shaped his understanding of the value attributed to virtual goods. He stated, "My absolute first encounter...was in Habbo Hotel. It was about getting a cool looking hotel and interacting with others. It was all about being the one in school with a cool item someone else didn't have."

As his gaming matured, so did his strategies surrounding microtransactions. Initially motivated by the aesthetics and rarity of items, his focus shifted towards their economic potential. The participant detailed how his engagement deepened when he began to understand the market dynamics within games, which allowed him to profit from trading items. This not only changed how he interacted with games but also highlighted the intricate economies that exist within gaming platforms.

The ethical considerations and fairness of microtransactions were critical themes that emerged from the discussion. The interviewee expressed concerns about how microtransactions are marketed, particularly towards vulnerable groups such as children. He criticized the aggressive marketing tactics that exploit younger players' lack of financial judgment, stating, "When it comes to being fair, I would say it really isn't fair...they really push microtransactions in these free-to-play global games."

His long-term engagement with games is heavily influenced by the presence of microtransactions. He described how certain games foster a community and status system around their microtransaction economies, which can enhance gameplay and social interactions but also lead to significant financial investment. Reflecting on this, he mentioned, "It is a way to 'boast' or show your wellbeing... I feel good when I buy a skin and I also feel a certain amount of pride if it is something hard to obtain or rare."

Looking to the future, the gamer suggested that the industry should strive for a balance between profitability and ethical consumer practices. He advocated for transparency in microtransaction costs, and the real value of money spent, which he believes would lead to a healthier gaming environment: "Maybe forcing companies to only show the real-life money amount could be a good first step."

This interview has provided valuable insights into the personal and economic aspects of microtransactions, revealing the complex motivations behind players' spending behaviours and the psychological impact of these systems. The discussion underscored the need for more ethical practices in the gaming industry, particularly as it relates to marketing strategies and the protection of vulnerable gamers.

4.2 Survey Results and Statistical Analysis

The survey aimed to explore consumer behaviour regarding microtransactions in free-to-play video games. It gathered responses from a diverse demographic, focusing on gaming habits, spending patterns, and perceptions of microtransactions. The data was collected from a variety of sources, including Reddit and individual participants with backgrounds relevant to the topic. This approach ensured a comprehensive understanding of the subject matter. The following analysis provides a detailed examination of the survey results, using statistical tools to highlight key trends and insights into consumer behaviour.

Demographics and Gaming Habits

The ages of survey participants varied from 16 to 54 years, with many in their early to mid-20s. Most of the respondents were male, comprising of 82.4%, while females made up 17.6%. The majority answered from Finland, though there was also a significant number from Germany, the Netherlands, and the USA.

Gaming Frequency and Platforms

Frequency of Playing Video Games:

- Daily: 23.3%
- Several times a week: 37.2%
- Weekly: 17.4%
- Less frequently: 20.9%
- Less frequently: 20.9%

How often do you play video games?

Number of respondents: 86

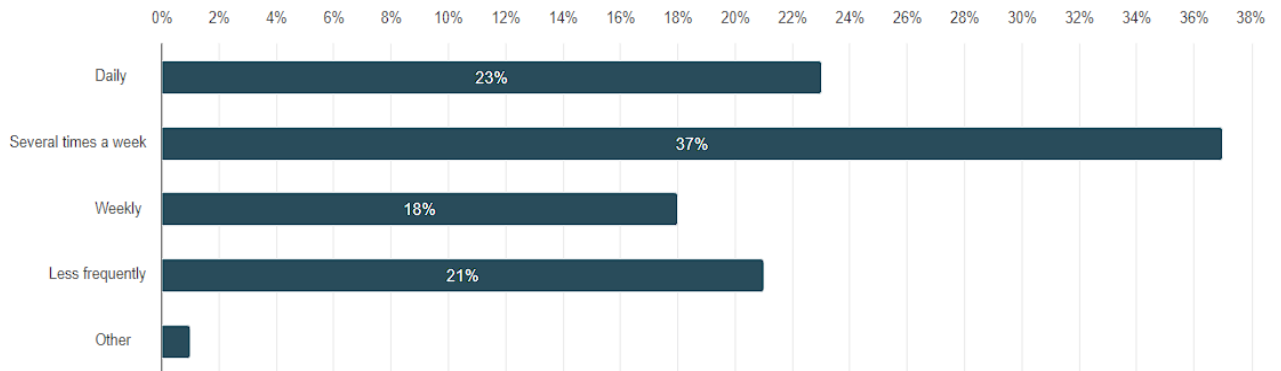


Figure 10. Webropol survey chart

Gaming Platforms:

- PC: 48.8 %
- Console: 46.5 %
- Mobile: 32.6 %
- Other (Switch/Nintendo Switch): 5.8%

These statistics indicate a high level of engagement with video games among the respondents, with the majority playing several times a week or more. PC and console gaming are the most popular platforms, while mobile gaming also has a substantial user base.

Preferred Video Game Genres

The survey revealed a diverse range of preferred video game genres among participants:

- First Person Shooter (FPS): 54.7%
- Battle Royale: 33.7%
- Simulation and Sports: 30.2%
- Role-Playing Games (RPG, ARPG, etc.): 39.5%
- Sandbox: 19.8%
- Multiplayer Online Battle Arena (MOBA): 27.9%
- Other: 9.3% (including Settlers of Catan, eFootball, and Visual novels)

FPS and RPG games are the most favoured genres, reflecting their widespread popularity in the gaming community.

Experience with Free-to-Play Games and Microtransactions

Experience with Free-to-Play Games:

- Yes: 84.9 %
- No: 15.1%

Use of Real Money for In-Game Content:

- Yes: 75.3 %
- No: 24.7%

A significant majority of respondents have experience with free-to-play games and have spent real money on in-game content, highlighting the prevalence of microtransactions in the gaming industry.

Types of In-Game Content Purchased

Participants reported purchasing various types of in-game content:

- Cosmetic items: 75%
- Functional items: 18.8%
- DLC or Expansion packs: 64.1%
- In-game currency: 40.6%
- Power-ups or boosters: 15.6%
- Other: 10.9%

Cosmetic items and DLC/expansion packs are the most purchased types of in-game content, suggesting that players are willing to spend money to enhance their gaming experience aesthetically and through additional content.

Spending Patterns and Motivations

Lifetime Spending on Microtransactions:

- Minimum: €10
- Maximum: €500
- Average: €140
- Median: €30
- Sum: €700
- Standard Deviation: €209.5

The spending on microtransactions varies significantly among respondents, with an average of €140 and a median of €30, indicating a skewed distribution where a few individuals spend considerably more than the average.

Motivations for Purchasing Microtransactions:

- To progress faster: 20%
- To enhance the gaming experience: 65.3%
- Social influence: 36%
- Impulse buying: 44%
- To collect items: 32%
- Other: 13.3%

Enhancing the gaming experience is the primary motivation for purchasing microtransactions, followed by impulse buying and social influence.

Perceptions of Fairness and Ethical Concerns

Perception of Fairness in Microtransactions:

- Yes: 22.1%
- No: 53.5%
- Unsure: 24.4%

Ethical Concerns Regarding Microtransactions:

- Exploitative pricing: 48.8%
- Targeting vulnerable players: 48.8%
- Lack of transparency: 53.5%
- Gambling-like mechanisms: 53.5%
- Pay-to-win elements: 55.8%
- Psychological manipulation: 39.5%
- None: 10.5%

A significant proportion of respondents perceive microtransactions as unfair and have ethical concerns, particularly regarding exploitative pricing, targeting vulnerable players, and lack of transparency.

Impact on Gaming Experience and Regulation

Impact of Microtransactions on Gaming Experience:

- Yes: 30.2%
- No: 31.4%
- Depends on the game: 38.4%

Regulation of Microtransactions:

- Yes: 55.8%
- No: 19.8%
- Unsure: 26.7%

There is a divided opinion on the impact of microtransactions on gaming experience, with many indicating it depends on the game. More than half of the respondents support the regulation of microtransactions.

Satisfaction and Regret Over Purchases

Satisfaction with Microtransaction Purchases:

- Minimum: 2
- Maximum: 10
- Average: 8
- Median: 10
- Sum: 56
- Standard Deviation: 3.1

Regret Over Microtransaction Purchases:

- Yes: 38.6%
- No: 50.6%
- Unsure: 10.8%

Most respondents are generally satisfied with their microtransaction purchases, although a notable percentage express regret over some purchases.

Impact on Game Play Duration

Impact of Microtransactions on Game Play Duration:

- Yes: 44.7%
- No: 43.5%
- Unsure: 11.8%

Respondents are almost evenly split on whether microtransactions impact their gameplay duration, suggesting varied experiences and perceptions.

5. Conclusions

5.1 Summary of Findings

This study explored the impact of microtransactions on consumer behaviour in free-to-play video games. The research combined survey data and interview insights to provide a comprehensive understanding of how microtransactions influence player's attitudes, spending habits, and overall gaming experiences.

Key Findings:

- **High Engagement with Microtransactions:** The majority of survey respondents frequently play free-to-play games and engage with microtransactions. This indicates that microtransactions are widely accepted and integrated into the gaming culture.
- **Diverse Motivations for Purchases:** Player's purchase microtransactions for various reasons. This includes enhancing their gaming experience through aesthetic improvements and additional content. Social influence and impulsive buying also play significant roles in driving purchases.
- **Spending Patterns:** Spending on microtransactions varies widely among players. While most people spend relatively small amounts, with an average of around €140 and a median of €30. There are some who spend significantly more. This means that although most players keep their spending modest, a small number of individuals invest a lot more. Resulting in a noticeable difference in spending patterns.
- **Ethical Concerns:** Many respondents express concerns about the fairness and transparency of microtransactions. There is a perception that these practices can exploit vulnerable players, especially children. Issues such as high prices, targeting susceptible individuals, and gambling-like elements in games are major concerns.
- **Impact on Gaming Experience:** The effect of microtransactions on the overall gaming experience is mixed. Some players feel that microtransactions enhance their enjoyment and immersion, while others believe they detract from the experience. Due to pay-to-win aspects and unfair advantages.

- **Support for Regulation:** A significant number of respondents support the regulation of microtransactions to protect consumers, particularly younger players. They advocate for greater transparency in pricing and the implementation of fair marketing practices.
- **Ethical and Psychological Impact:** The interview provided deeper insights into the ethical and psychological impact of microtransactions. The seasoned gamer highlighted concerns about aggressive marketing tactics and the potential for developing addictive behaviours. He emphasised the need for ethical consumer practices in the gaming industry.

Overall, the findings highlight the complicated and varied impact of microtransactions in free-to-play games. They can enhance the gaming experience and provide economic opportunities for players. However, they also raise important ethical and psychological issues that the gaming industry needs to address.

5.2 Discussions

The survey results provide a clear picture of how microtransactions influence consumer behaviour in free-to-play games. Most respondents frequently play these games and spend money on microtransactions, indicating their widespread acceptance and integration into gaming culture. Players often buy microtransactions to enhance their gaming experience, driven by aesthetic improvements and additional content. However, many purchases are also made impulsively or due to social pressure from friends and the gaming community, highlighting diverse motivations.

Despite their popularity, microtransactions come with significant ethical concerns. Many respondents worry about fairness and transparency, with some feeling that microtransactions exploit vulnerable players, particularly children. Issues such as high prices, targeting susceptible individuals, and gambling-like elements in games are major concerns. These concerns have led many players to support regulation to protect consumers, especially younger ones.

The impact of microtransactions on the overall gaming experience is mixed. Some players feel that they enhance their enjoyment, while others believe they detract from it. This split opinion suggests that the effect of microtransactions largely depends on how they are implemented in each game. For some, buying items adds to the fun and immersion, while for others, it feels unfair or exploitative.

5.3 Recommendations

In conclusion, microtransactions are a well-established part of free-to-play games. They do raise several ethical issues and provoke mixed reactions from players. Their widespread use indicates the need for a balanced approach that considers both the benefits for game developers and the potential risks to players.

To maintain a positive impact of microtransactions, it is important to ensure greater transparency in their implementation. Game developers should adopt ethical marketing practices that do not exploit vulnerable players, particularly children. There should also be regulatory measures to protect consumers from unfair practices and gambling-like mechanisms. By addressing these concerns, the gaming industry can create a safer and more enjoyable environment for all players.

6. Future Research Directions

This research highlights how microtransactions affect consumer behaviour in free-to-play video games. Key findings show their widespread acceptance, diverse spending motivations, ethical concerns, and mixed impacts on gaming. Continuing research in this area is essential for a deeper understanding and to address emerging issues.

One limitation of this study is the potential bias in survey responses, primarily sourced from Reddit and gaming communities. Future research should aim for a more diverse sample to improve generalizability. Additionally, reliance on self-reported data may lead to inaccuracies. Future studies could incorporate objective data collection methods, such as tracking in-game spending and behaviour.

New questions emerged from this study, such as how microtransactions affect long-term player engagement and satisfaction. Future research could explore the long-term impacts on player loyalty and retention. Another important area is the psychological effects on different age groups, especially children. Understanding these impacts could lead to age-specific regulations or guidelines.

Advancements in data analytics and machine learning could help analyse vast amounts of in-game behaviour data, uncovering new patterns and trends. Additionally, exploring microtransactions in virtual reality (VR) and augmented reality (AR) platforms could provide insights into future gaming environments.

Long-term studies are needed to track changes in player behaviour and attitudes toward microtransactions over time. Comparative studies across different cultures or gaming platforms could broaden our understanding of how regional and cultural factors influence perceptions and spending habits.

Future research can greatly expand our understanding of microtransactions and their effects on gaming. By overcoming the limitations of current studies, exploring new questions, and conducting further research, we can build on the insights from this thesis. Continued exploration will enhance academic knowledge, guide industry practices, and inform policy-making, ultimately benefiting both players and developers.

7. Limitations of the Study

Detailed Limitations:

- Sample Size and Demographics
- Methodological Constraints
- Scope of Research
- Theoretical Constraints
- Technological and Temporal Changes

It's important to acknowledge the limitations of this study to understand its context and implications better. The sample size and demographics, primarily sourced from Reddit and gaming communities, might not fully represent the broader gaming population which could introduce bias.

Methodological constraints, such as the reliance on self-reported data, can lead to inaccuracies and affect the reliability of the findings. The study's scope, focusing on specific aspects of microtransactions, may overlook other relevant areas that could provide a more comprehensive understanding.

The theoretical frameworks used also impose certain limitations, potentially restricting the interpretation of the results. Additionally, rapid technological changes in the gaming industry could impact the relevance and applicability of the study's findings over time.

These limitations highlight the need for future research to address these issues. Expanding the sample size and diversity, using more objective data collection methods, and exploring a broader range of aspects related to microtransactions will help provide a more complete picture. By addressing these limitations, future studies can enhance our understanding of microtransactions and their impact on gaming.

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Appendix 1: Preliminary Table of Contents

Chapter 1: Introduction

- Includes the background to the topic, key concepts, theories on consumer behaviour, the concept of microtransactions, game development and marketing concepts, ethical considerations, primary research methodology, and an overview of data analysis and findings.

Chapter 2: Theoretical Framework

- Should be divided into the main components of your theory, discussing the relevant topics in detail.

Chapter 3: Research Methods

- Follow the standard structure from the course book, including the design, data collection, and analysis methods. Discuss any risks associated with your study.

Chapter 4: Results and Discussion

- Organized into subchapters based on research questions (IQs), stakeholder perspectives, or research phases. Interpret and analyse the survey and interview results, linking them to existing literature and theories.

Chapter 5: Conclusions and Recommendations

- Summarize the key findings, discuss their implications, provide actionable recommendations, and suggest areas for future research.

Appendix 2: Survey questions

Survey Outline

Demographic Information (Pg1)

- Age
- Country
- Gender

Gaming habits (Pg 2)

- How often do you play video games? (Multiple choice)
- What platforms do you primarily use for gaming? (Multiple choice)
- What are your preferred video game genres? (Multiple choice)
- Have you played a free-to-play video game? (If yes other question)
 - What free-to-play video game have you played? (Multiple choice)

Experience with Microtransactions (Pg 3)

- Have you ever used real money to purchase any type of in-game content, such as cosmetics, items, DLC, or power-ups, in a video/mobile game?" (If yes other question)
 - If you answered Yes, what types of in-game content have you purchased with real money? Please select all that apply.
- Approximately how much have you spent on microtransactions in your lifetime (rough estimate) (Scale)
- What motivates you to purchase microtransactions? (Multiple choice)

Spending and Motivation (Pg 4)

- Do you believe microtransactions are implemented fairly across various video games? (Multiple choice)
- Do you think microtransactions enhance your gaming experience? (Multiple choice)
- Do you have any ethical concerns regarding microtransactions? (Check all that apply) (Multiple choice)
- Do you think there should be more regulation around microtransactions in video games? (Multiple choice)

Perceptions and Ethics (Pg5)

- On a scale of 1 to 10, where 10 is the most satisfied and 1 is the least satisfied, how satisfied are you with the purchases you've made through microtransactions? (Scale)

- Have you ever regretted a purchase made through microtransactions? If so, please describe the circumstances.
- Do microtransactions encourage you to play a game for a longer period than you would have otherwise?
- Is there anything else you would like to share about your experience or opinions regarding microtransactions in video games? (Open ended)

Appendix 3: Interview questions

Interview Questions

1. Introduction to Microtransactions:

- "Could you describe your earliest experience with microtransactions in video games?"
- "What was your first reaction when you encountered the option to purchase in-game content with real money?"

2. Purchasing Behaviour and Motivation:

- "What motivates you to spend money on microtransactions in games?"
- "How do different games influence your decision to buy or avoid microtransactions?"
- "Have your motivations changed over the years as you've spent more time playing games?"

3. Perceptions and Satisfaction:

- "How would you rate your overall satisfaction with the microtransactions you've purchased?"
- "Can you describe a positive experience where a microtransaction enhanced your gaming experience?"
- "Have you ever regretted a purchase made through microtransactions? If so, what led to that regret?"

4. Attitudes and Ethical Considerations:

- "Do you believe the implementation of microtransactions is fair across most games? Why or why not?"
- "What ethical concerns, if any, do you have about microtransactions in video games?"
- "Do you believe that microtransactions target specific groups or demographics in unfair ways?"

5. Impact on Gaming Habits:

- "How do microtransactions influence the way you play and engage with video games?"
- "Have microtransactions affected the amount of time you spend playing games or which games you choose to play?"

6. Regulation and Future Developments:

- "Do you think there should be more regulation around microtransactions in video games? What would be effective in improving the system?"
- "How do you think the gaming industry should approach microtransactions in the future to balance business and consumer needs?"

7. Additional Insights:

- "Is there anything else about your experience with microtransactions or your attitudes toward them that you'd like to share?"

Appendix 4: Consent form and Text

I hereby give my consent to participate in the research of Karim Kakko's Thesis, The Impact of Microtransactions on Consumer Behaviour in Free-to-Play Video Games. According to the research announcement provided as an attachment.

The content of the aforementioned research announcement has been explained to me, and I understand the nature of the study, what participation entails for me, how the data I provide will be used, and how it will be stored. I have had the opportunity to ask questions and have received satisfactory answers to all my inquiries.


I understand that participation in the research is voluntary. I am aware that I can withdraw this consent at any time without giving a reason, and for instance, I can discontinue the interview if I so desire.

Consent can be withdrawn. Please note that once the research results have been analyzed, the contribution of a single participant cannot be retrospectively removed.

For additional information about the research, Karim Kakko (karim.kakko@myy.haaga-helia.fi) can be contacted.

Name of the Consent Giver: Esko Laakso

01. Toukokuu.2024
Date


Signature

Survey starting text:

Thank you for participating in our survey, "The Impact of Microtransactions: A Survey on Consumer Attitudes and Behaviors." Your responses will help us understand gamers' perspectives on microtransactions and will remain anonymous and confidential.

Please note:

1. Your participation is voluntary, and you can skip any questions or exit the survey at any time.
2. Your responses will be anonymous and only used for research purposes.
3. The survey will take about 2-5 minutes to complete. If you have questions, feel free to contact us at karim.kakko@myy.haaga-helia.fi.

Thank you for your valuable input!